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**COURSE CODE: CHM102**

**DEPARTMENT : MEDICINE AND SURGERY**

**MATRIC NO: 19/MHS01/366**

 **ASSIGNMENT**

1. Name the functional groups present in each of the following molecules

(i) CH2=C(OH)HCHO : Alkene (Double bond) , Alkanol(OH), Alkanal(CHO)

 (ii) C6H5CH(NH2)COCH3 :Amine(NH2) , Phenyl, Ketone(R-CO-R')(iii) CH3C=CHCH(OH)CHO : Alkene(double bond), Alkanol(OH), Aldehyde(CHO)

2. A 0.856 g sample of pure (2R, 3R)-tatrtaric acid was diluted to 10cm3 with water and placed in a 1.0 dm polarimeter tube. the observed rotation at 200 C was +1.00. Calculate the specific rotation of (2R, 3R)-tartaric acid.

 **Solution**

SPECIFIC ROTATION= observed rotation(in degrees)

 Concentration × path length of sample cell

 **DATA GIVEN**

Observed rotation(20°C)= +1.0°

 Concentration(g/cm³) = mass/volume

 = 0.856g/10cm³

 = 0.0856g/cm³

 Path length sample of the cell= 1.0dm

 .: SPECIFIC ROTATION= +1.0°

 0.0856g/cm³ × 1.0dm

 =+11.68°cm³/gdm

3.Draw the possible geometric isomers (where possible) for each of the following compounds:  i) Hexa-2,4-diene ii)2,3-Dimethylbut2-ene

